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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,590	04/21/2004	Yi-Qun Li	034172-017	6712
21839 7590 04/02/2008 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER KOSLOW, CAROL M	
			ART UNIT 1793	PAPER NUMBER
			NOTIFICATION DATE 04/02/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

# Office Action Summary

**Application No.**

10/829,590

**Applicant(s)**

LI ET AL.

**Examiner**

C. Melissa Koslow

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-10, 15 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 4-9 and 15 is/are allowed.
- 6) ☒ Claim(s) 10 and 19-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

This action is in response to applicants' amendment of 24 January 2008. The drawings were received on 24 January 2008. These drawings are acceptable and thus the objections to the drawings are withdrawn. The rejections over claims 1-3, 11-14 and 16-18 and the objection to the specification based on the teachings in these claims are withdrawn due to the amendment which cancelled these claims. The objection to the disclosure with respect to "(????)" is withdrawn due to the amendments to the specification. The amendments to the claims have overcome the 35 USC 112, second paragraph rejections over claims 4-10 and 15. Upon further consideration, the objection to claim 10 with respect to the wording of step 1 and the art rejection over claim 10 based on WO 03/40058 are withdrawn. Applicant's arguments with respect to the remaining objections and 35 USC 112 rejections over claim 10 have been fully considered but they are not persuasive.

The disclosure is objected to because of the following informalities: In paragraph [0005] the conjunctions between the elements defining A, B and M are missing. Appropriate correction is required.

The amendments to the specification did not overcome this objection and thus it is maintained.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claims 4-9 teach the coercive is "about" a value and table 1 and paragraphs 25 and 26 teach the coercive field in terms of an exact value. The specification fails to provide proper antecedent basis for the claimed "about". The claimed term "saturation magnetization" for the

values of claims 4-9 is not taught in the specification for the claimed values/ Table 1 labels the claimed values as "remanent magnetization". Finally, the specification does not teach the claimed elements Y, Gd, Ta, W, Nb and Al.

Applicants did not address this objection and thus it is maintained.

Claim 10 is objected to because of the following informalities: There are no conjunctions in the listed lists of elements and "of" is missing after the phrase "metal oxide". Appropriate correction is required.

The amendment to claim 10 did not overcome these objections. Applicants stated they canceled claim 10 but the claim is still pending. Therefore the rejection is maintained.

Claims 19-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claimed x range is not supported by the originally filed disclosure. The originally filed disclosure is  $0 < x < 0.15$ , but the newly claimed range is  $0 \leq x \leq 0.15$ . In addition, the specification teaches only those calcium and barium titanates, hafnates or zirconates containing 5 mol% Fe substituted for Ba or Ca will have the claimed properties. The originally filed disclosure does not teach all the compositions that fall within the formulas of claims 19-24 will have the claimed properties.

Claim 10 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for producing a ferromagnetic perovskites having the general formulas  $A_{1-x}$

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$M_xBO_3$  or  $A(B_{1-x}M_x)O_3$ , where A is at least one of Ca, Sr, Ba, Pb, Y, La and Gd, B is at least one of Ti, Zr, Hf, Sn, Mo, Ta, W, Nb and Al and M is at least one of Fe, Co, Ni, Mn and V and  $0 < x < 0.15$  does not reasonably provide enablement for a producing any magnetic ferromagnetic perovskite containing at least one of Ca, Sr, Pb, Y La and Gd; at least one of Ti, Zr, Hf, Sn, Sn, Mo, Ta, W, Nb and Al and at least one of Fe, Co, Ni, Mn and V. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims recite ferromagnetic perovskite. This encompasses any ferromagnetic perovskite such as those in WO 01/77024. However, the specification only teaches the perovskites having the general formulas  $A_{1-x}M_xBO_3$  or  $A(B_{1-x}M_x)O_3$ , where A is at least one of Ca, Sr, Ba, Pb, Y, La and Gd, B is at least one of Ti, Zr, Hf, Sn, Mo, Ta, W, Nb and Al and M is at least one of Fe, Co, Ni, Mn and V and  $0 < x < 0.15$ . In addition the specification teaches the inventive perovskites are semiconductors having Curie temperatures higher than 300K, but the claimed process produced ferromagnetic perovskites which are not semiconductors having Curie temperatures higher than 300K. Such a limited disclosure does not support the breadth of the instant claims.

The amendment to claim 10 did not overcome this rejection. Applicants stated they canceled claim 10 but the claim is still pending. Therefore the rejection is maintained.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/77024.

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This reference teaches producing a ferromagnetic perovskite oxide comprising Fe, Mo and at least one of Ca, Sr and Ba by a standard solid state reaction in 2% H<sub>2</sub>/N<sub>2</sub>, which is a reducing atmosphere. The standard solid state reaction comprises selecting, which applicants define as preparing, oxides of the desired metals in the desired stoichiometric amounts, mixing the oxides and firing the mixture. The reference teaches the claimed method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/cmk/  
March 31, 2008

/C. Melissa Koslow/  
Primary Examiner  
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